

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in view of the present amendment and in light of the following comments, is respectfully requested.

Claims 1-23 are pending in this application. Claims 1, 10, 15, and 23 are amended. Applicants note that entry of the amendment will place the application in better form for appeal and respectfully request that the Examiner enter the amendment on the record. It is respectfully submitted that no new matter is added by this response.

In the outstanding Office Action, Claims 10 and 23 were rejected under 35 U.S.C. §112, second paragraph, due to insufficient antecedent basis; Claims 1-6, 8, 15-19, and 21 were rejected under 35 U.S.C. §103(a) as unpatentable over Sheu (U.S. Patent No. 5,781,715) in view of Jolissaint et al. (U.S. Patent No. 5,276,440, hereafter Jolissaint); Claims 7 and 20 were rejected under 35 U.S.C. §103(a) as unpatentable over Sheu in view of Gagliardi et al. (U.S. Patent No. 5,442,630, hereafter Gagliardi); Claims 9 and 22 were rejected under 35 U.S.C. §103(a) as unpatentable over Sheu in view of Adams (U.S. Patent No. 5,142,532); Claims 10 and 23 were rejected under 35 U.S.C. §103(a) as unpatentable over Sheu in view of Suzuki (U.S. Patent No. 4,884,263); and Claims 11-14 were allowed.

Applicants thank the Examiner for the early indication of the allowability of Claims 11-14.

In response to the rejection of Claims 10 and 23 under 35 U.S.C. §112, second paragraph, Claims 10 and 23 are amended as suggested in paragraph 2 of the outstanding Office Action to provide sufficient antecedent basis for "the group." Therefore, it is respectfully requested that this rejection be withdrawn.

Claim 15 is amended to correct a minor typographical error, and it is respectfully submitted that no new matter is added by this amendment.

Before turning to the outstanding art rejections, it is believed that a brief review of the invention would be helpful. The present invention is directed to a network for distributing information and a fault management process for the network.<sup>1</sup> The network for distributing information recited in amended Claim 1 includes splitting devices connected to a central unit and to stations including interface devices, wherein "the interface device of each station is linked to a first splitting device and a second splitting device by the interface device of at least one additional station." Further, "protocol exchanges between the central unit and interface device are organized such that the central unit can determine whether a terminal is faulty, an interface is faulty, or the splitting device is faulty." Independent Claim 15 recites a network for distributing information between a central unit and stations that include an interface device, "wherein the interface device of each station is linked to a first splitting device and to a second splitting device, and wherein the plural interface devices are mounted in cascade on a link starting from a splitting device." The above features are believed to distinguish over the applied art.

In a non-limiting example as shown in Figure 1, station 3 including interface device 23 is directly connected to switching device 20 and is connected to switching device 21 by station 4 including interface device 24. Switching devices 20 and 21 are both connected to central unit 19. For the central unit 19 to be informed of a fault, the central unit 19 and the interface device 23 periodically sends a protocol message regarding availability.<sup>2</sup> The protocol exchanges between the central unit 19 and the interface device 23 are organized such that the central unit can determine whether a terminal is faulty, an interface is faulty, or the whole splitting device is faulty.<sup>3</sup> Further, it should be noted in the non-limiting example shown in Figure 1 that station 3 including interface device 23 and station 4 including

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<sup>1</sup> Applicants' specification, page 1, lines 4-18.

<sup>2</sup> Applicants' specification at least at page 7, line 25 to page 8, line 21.

<sup>3</sup> *Id.*

interface device 24 are mounted in cascade (in series) on a link starting from the splitting device 20.

Sheu discloses a fault-tolerant brouter designed to prevent packet loss so that a source station does not have to resend lost packets block due to a failed processing element.<sup>4</sup> In Sheu, when a processing element fails a switchover mechanism is employed to dynamically switch the function from the failed processing element to a second processing element that received the same packet.<sup>5</sup> The switchover is accomplished by messages exchanged between the processing elements, and not by "protocol exchanges between the central unit and the interface device," as recited in amended Claim 1.<sup>6</sup> Therefore, Sheu does not disclose protocol exchanges between the central unit and the interface device organized such that the central unit can determine the splitting device is faulty as stated in the outstanding Office Action on page 3, lines 5-7.

Further, page 2, line 25 to page 3, line 7 of the outstanding Office Action indicates that brouter 20, stations 32-34, and processing elements 22, 24, 26, and 28 in Figure 2 of Sheu correspond to the central unit, stations, and splitting devices of the claims, respectively. Further, the outstanding Office Action states the interface device in each station is implicitly shown.<sup>7</sup> However, Sheu does not disclose "the interface device of each station is linked to a first splitting device and to a second splitting device via the interface device of at least one additional station," as recited in amended Claim 1.

The outstanding Office Action relies on column 6, lines 25-30 of Jolissaint as disclosing a communication network wherein "error report information (protocol) exchanges between a network manager 30 (central unit) and the nodes 12-26 (devices) to determine

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<sup>4</sup> Sheu, column 2, lines 13-23.

<sup>5</sup> Sheu, column 3, lines 52-60.

<sup>6</sup> Sheu, column 4, lines 5-12.

<sup>7</sup> Office Action mailed August 9, 2004, page 3, line 3.

whether the nodes is faulty or a link is faulty.<sup>8</sup> However, Jolissaint does not disclose splitting devices, and therefore, the error reports generated by the nodes 12-26 and sent to network manager 30 do not teach or suggest protocol exchanges between the central unit and the interface device organized such that the central unit can determine whether the splitting device is faulty, as recited in amended Claim 1. Further, Jolissaint does not teach or suggest that "the interface device of each station is linked to a first splitting device and to a second splitting device by the interface device of at least one additional station," as recited in amended Claim 1. Therefore, even if the combination of Sheu and Jolissaint is assumed to be proper, the combination fails to teach or suggest every element of amended Claim 1. Specifically, the combination fails to teach "protocol exchanges between the central unit and the interface device are organized such that the central unit can determine whether a terminal is faulty, an interface is faulty, or the splitting device is faulty," as also required in Claim 1.

The outstanding Office Action further states "it would have been obvious to a person of ordinary skill in the art to employ exchanges of report information as taught by Jolissaint in Sheu's system to determine the location of a network failure."<sup>9</sup> The record, however, fails to provide any required evidence of a motivation for a person of ordinary skill in the art to perform such a modification. In particular, Jolissaint uses error reports generated by a plurality of network devices to provide information to a network manager to locate a failure of the network. However, Jolissaint does not teach or suggest the error reports would work with a fault-tolerant brouter as described in Sheu that is concerned with the prevention of packet loss, thereby avoiding a source station having to resend lost packets due to a failed processing element within the brouter.

Sheu and Jolissaint, therefore, do not provide the motivation to perform the proposed modification of the brouter in Sheu. In other words, an attempt to combine the isolated

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<sup>8</sup> Office Action mailed August 9, 2004, page 3, lines 11-14.

<sup>9</sup> Office Action mailed August 9, 2004, page 3, lines 16-19.

teaching of Jolissaint's error reporting along with Sheu's brouter would amount to improperly picking and choosing features from different references without regard to the teachings of the references as a whole.<sup>10</sup>

Cited references Gagliardi, Adams, and Suzuki have been considered but do not cure the deficiencies discussed above with respect to amended Claim 1. Therefore, it is respectfully requested that the rejection to independent Claim 1 be withdrawn for the above discussed reasons. Likewise, it is respectfully requested that the rejection to dependent Claims 2-10 that depend from independent Claim 1 also be withdrawn for at least the same reasons as discussed above with respect to independent Claim 1.

The outstanding Office Action addresses dependent Claim 2 and independent Claim 15 on page 3, line 20 to page 4, line 2, and states Sheu discloses "plural interface devices are mounted in cascade on a link starting from the splitting device (Fig. 2; shown interface devices of station 1 and 2 are cascaded)." Figure 2 of Sheu illustrates a primary path series connection between Station 1, processing element 22, processing element 28, and Station 2. However, Sheu does not disclose a cascade (series) in which Station 1 and Station 2 are connected in series starting from a processing element. Therefore, Sheu does not teach or suggest "plural interface devices are mounted in cascade on a link starting from a splitting device," as recited in dependent Claim 2 and independent Claim 15.

Cited references Jolissaint, Gagliardi, Adams, and Suzuki have been considered with respect to independent Claim 15. However, Jolissaint, Gagliardi, Adams, and Suzuki do not cure the deficiencies discussed above with respect to independent Claim 15. Accordingly, it is respectfully requested that this rejection to independent Claim 15 be withdrawn. Likewise, it is respectfully requested that the rejection to dependent Claims 16-23 that depend from

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<sup>10</sup> See In re Ehrreich 590 F2d 902, 200 USPQ 504 (CCPA, 1979) (stating that patentability must be addressed "in terms of what would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the sum of all the relevant teachings in the art, not in view of first one and then another of the isolated teachings in the art," and that one "must consider the entirety of the disclosure made by the references, and avoid combining them indiscriminately.")

independent Claim 15 be withdrawn for at least the same reasons as discussed above with respect to independent Claim 15.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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